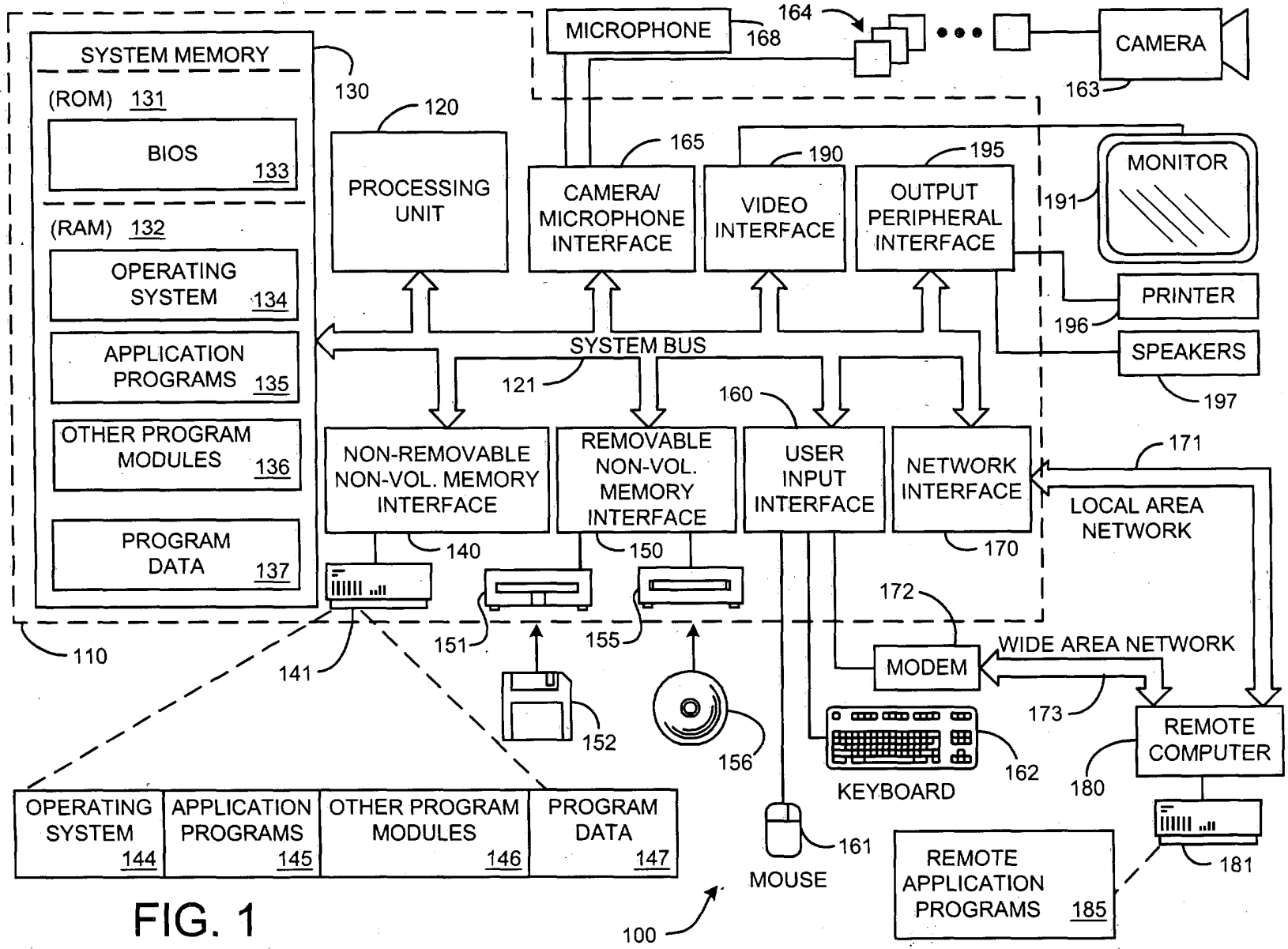

SYSTEM MEMORY
130
(ROM) 131
BIOS 133
(RAM) 132
OPERATING SYSTEM 134
APPLICATION PROGRAMS 135
OTHER PROGRAM MODULES 136
PROGRAM DATA 137
110
120
PROCESSING UNIT
MICROPHONE
168
164
CAMERA
163
165
CAMERA/ MICROPHONE INTERFACE
190
VIDEO INTERFACE
195
OUTPUT PERIPHERAL INTERFACE
MONITOR
191
PRINTER
196
SPEAKERS
197
SYSTEM BUS
121
160
NON-REMOVABLE NON-VOL. MEMORY INTERFACE
140
REMOVABLE NON-VOL. MEMORY INTERFACE
150
USER INPUT INTERFACE
NETWORK INTERFACE
170
171
LOCAL AREA NETWORK
141
151
155
172
MODEM
WIDE AREA NETWORK
173
REMOTE COMPUTER
180
152
156
KEYBOARD
162
OPERATING SYSTEM 144
APPLICATION PROGRAMS 145
OTHER PROGRAM MODULES 146
PROGRAM DATA 147
161
MOUSE
REMOTE APPLICATION PROGRAMS 185
181
100

FIG. 1

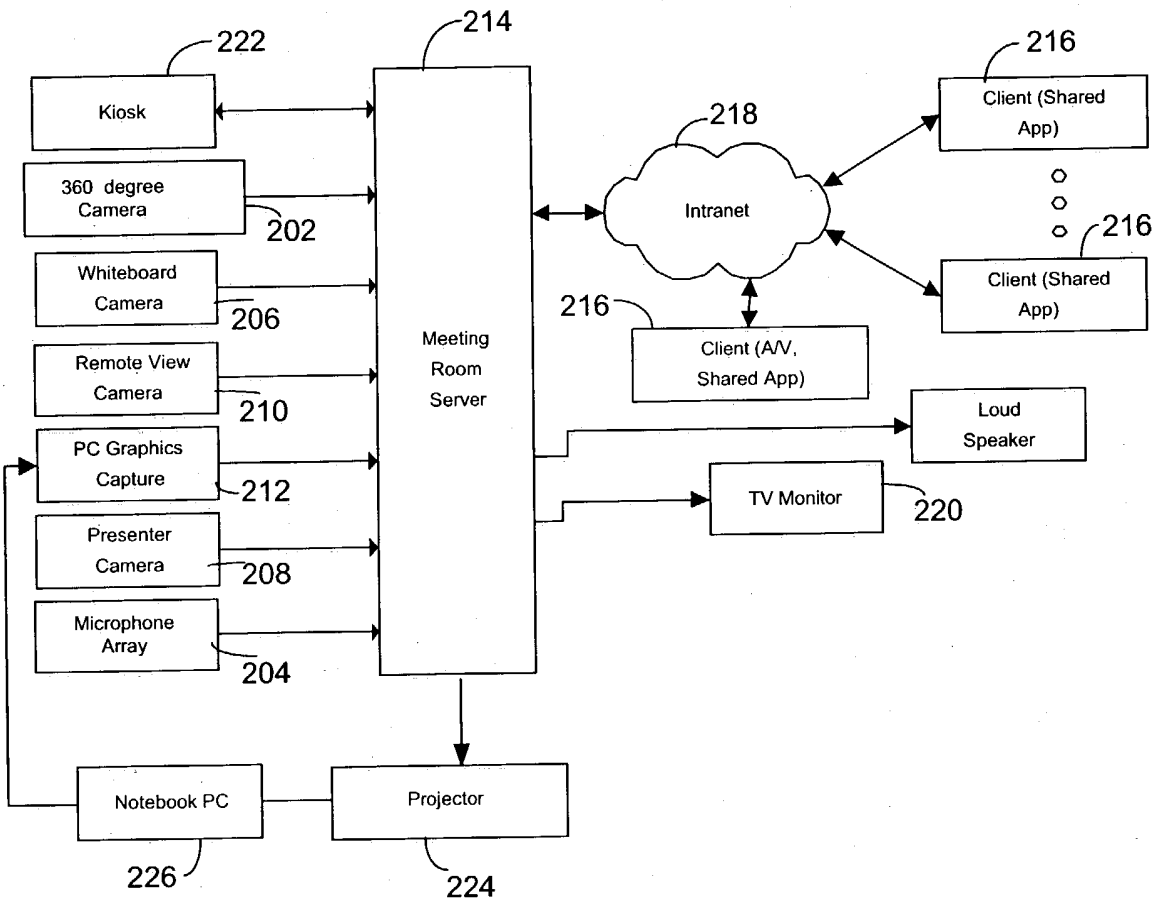

222
214
216
Kiosk
360 degree Camera
202
Whiteboard Camera
206
Remote View Camera
210
PC Graphics Capture
212
Presenter Camera
208
Microphone Array
204
Meeting Room Server
218
Intranet
Client (Shared App)
216
Client (Shared App)
216
Client (A/V, Shared App)
Loud Speaker
TV Monitor
220
Notebook PC
226
Projector
224

FIG. 2

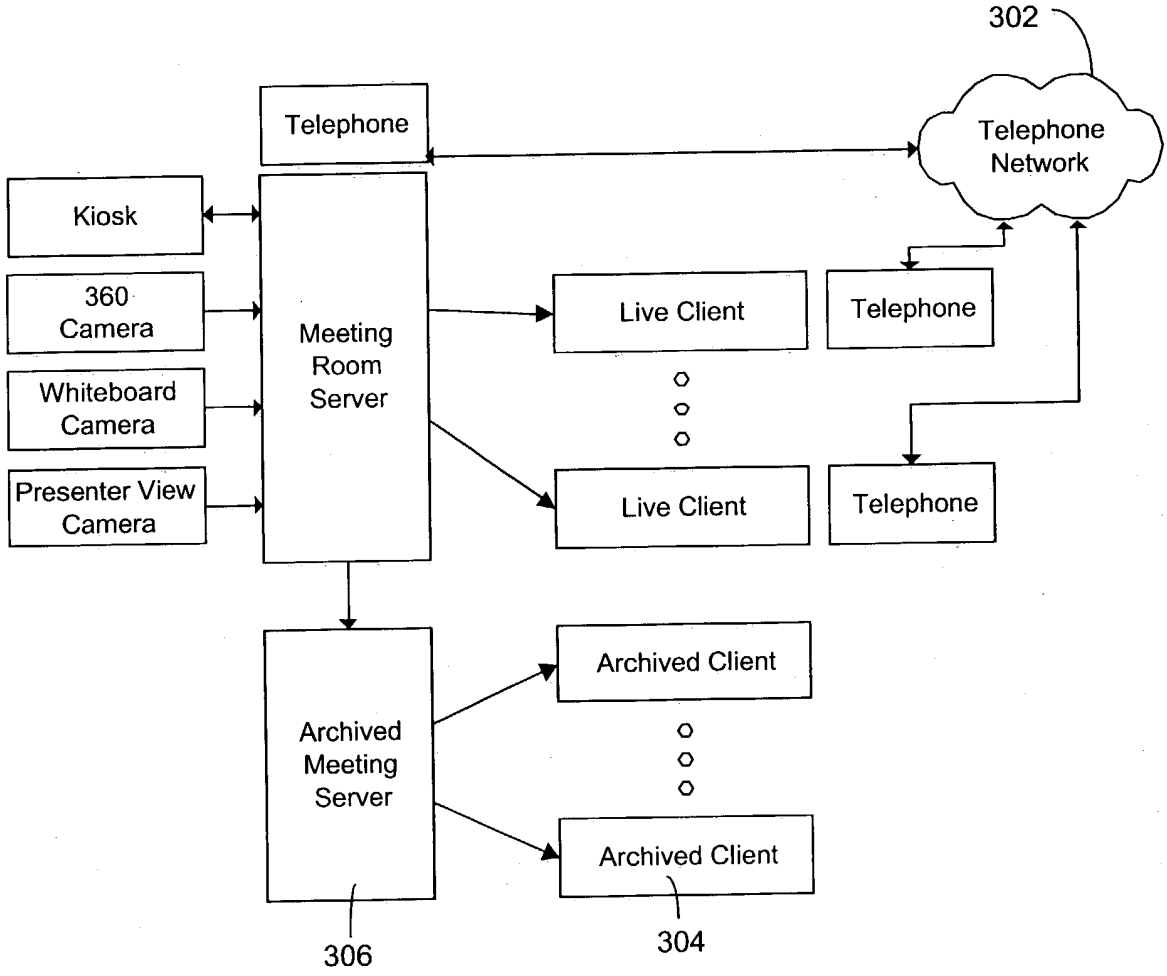

302
Telephone
Telephone Network
Kiosk
360 Camera
Whiteboard Camera
Presenter View Camera
Meeting Room Server
Live Client
Live Client
Telephone
Telephone
Archived Meeting Server
Archived Client
Archived Client
306
304

FIG. 3

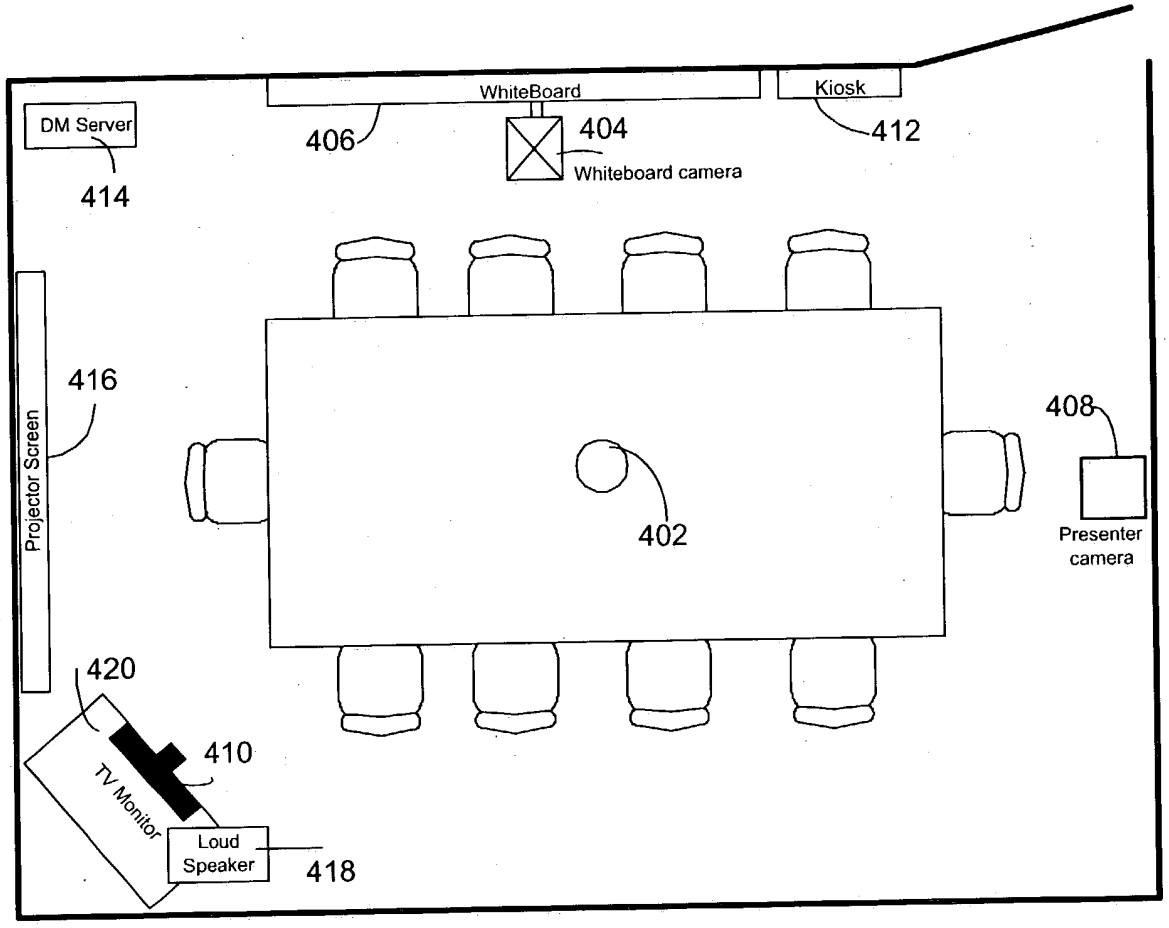

WhiteBoard
Kiosk
DM Server
406
404
412
Whiteboard camera
414
416
408
Projector Screen
402
Presenter
camera
420
410
TV Monitor
Loud
Speaker
418

FIG. 4

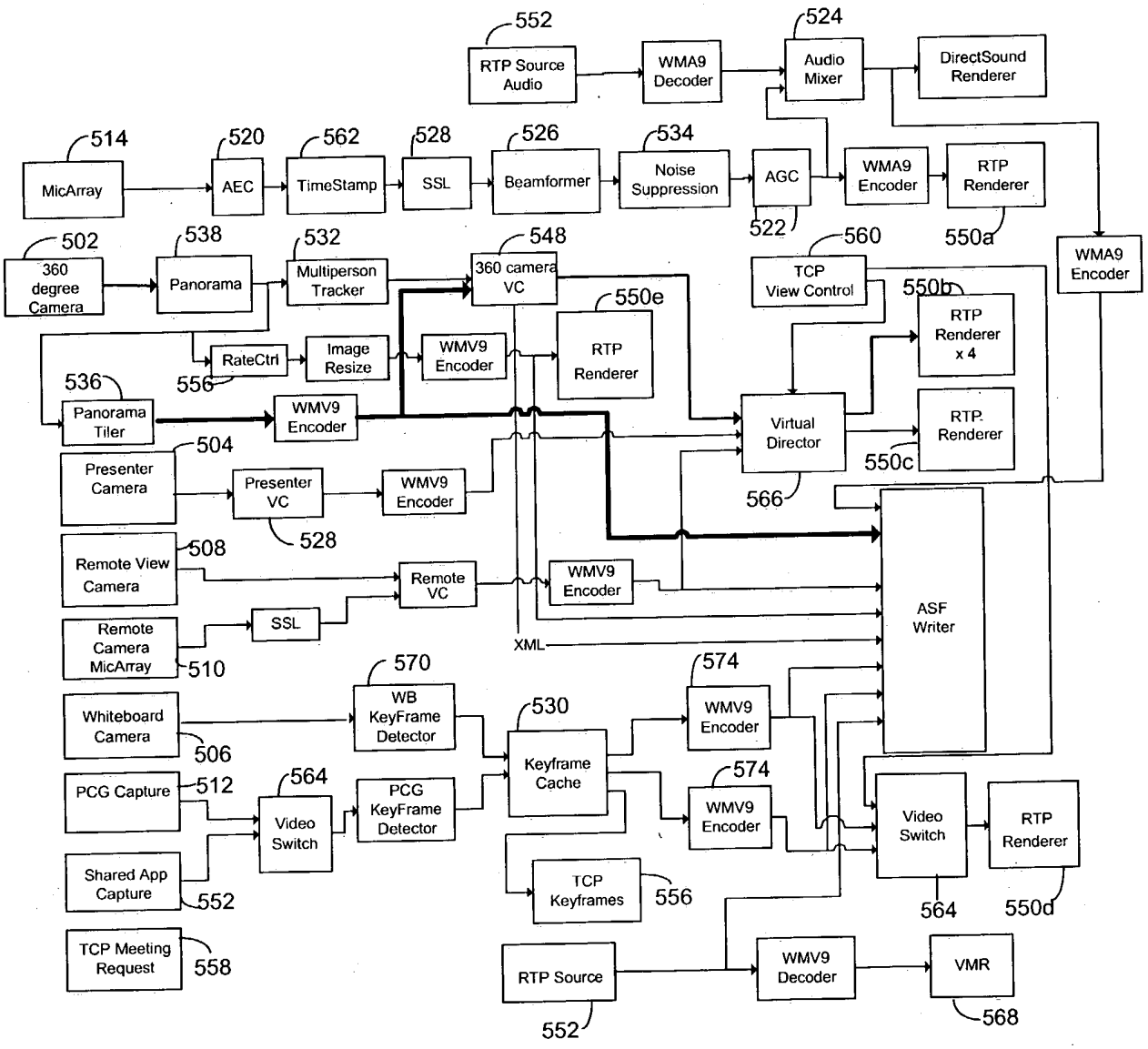

552
RTP Source Audio
WMA9 Decoder
524
Audio Mixer
DirectSound Renderer
514
MicArray
520
AEC
562
TimeStamp
528
SSL
526
Beamformer
534
Noise Suppression
AGC
522
WMA9 Encoder
RTP Renderer
550a
502
360 degree Camera
538
Panorama
532
Multiperson Tracker
548
360 camera VC
560
TCP View Control
WMA9 Encoder
550b
RTP Renderer x 4
550e
RTP Renderer
RateCtrl
556
Image Resize
WMV9 Encoder
536
Panorama Tiler
WMV9 Encoder
Virtual Director
RTP Renderer
550c
504
Presenter Camera
Presenter VC
528
WMV9 Encoder
566
508
Remote View Camera
Remote VC
WMV9 Encoder
ASF Writer
Remote Camera MicArray
510
SSL
XML
570
Whiteboard Camera
506
WB KeyFrame Detector
530
Keyframe Cache
574
WMV9 Encoder
PCG Capture
512
564
Video Switch
PCG KeyFrame Detector
574
WMV9 Encoder
Video Switch
RTP Renderer
Shared App Capture
552
TCP Keyframes
556
564
550d
TCP Meeting Request
558
RTP Source
552
WMV9 Decoder
VMR
568

FIG. 5

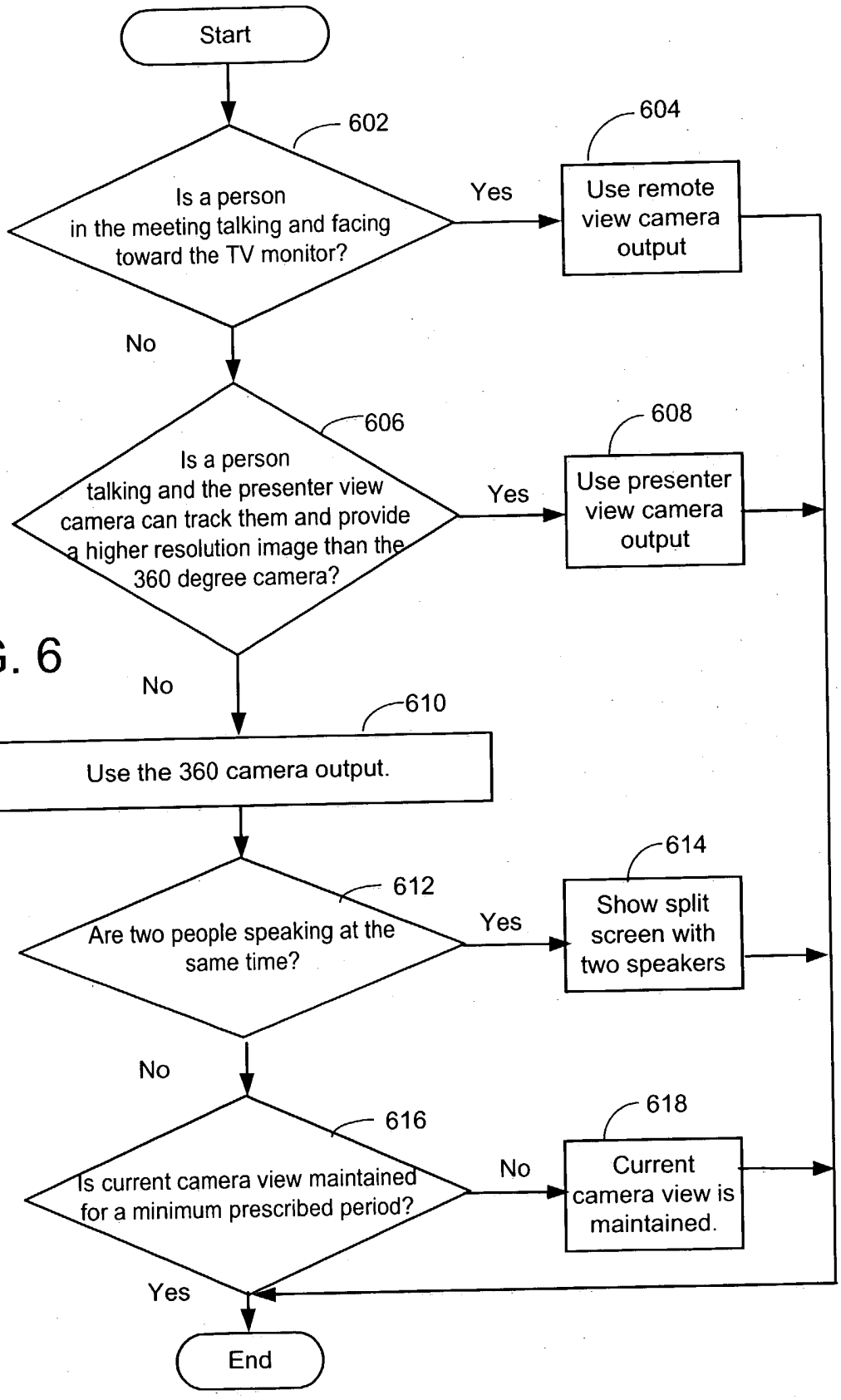

Start
602
Is a person in the meeting talking and facing toward the TV monitor?
Yes
604
Use remote view camera output
No
606
Is a person talking and the presenter view camera can track them and provide a higher resolution image than the 360 degree camera?
Yes
608
Use presenter view camera output
No
610
Use the 360 camera output.
612
Are two people speaking at the same time?
Yes
614
Show split screen with two speakers
No
616
Is current camera view maintained for a minimum prescribed period?
No
618
Current camera view is maintained.
Yes
End

FIG. 6

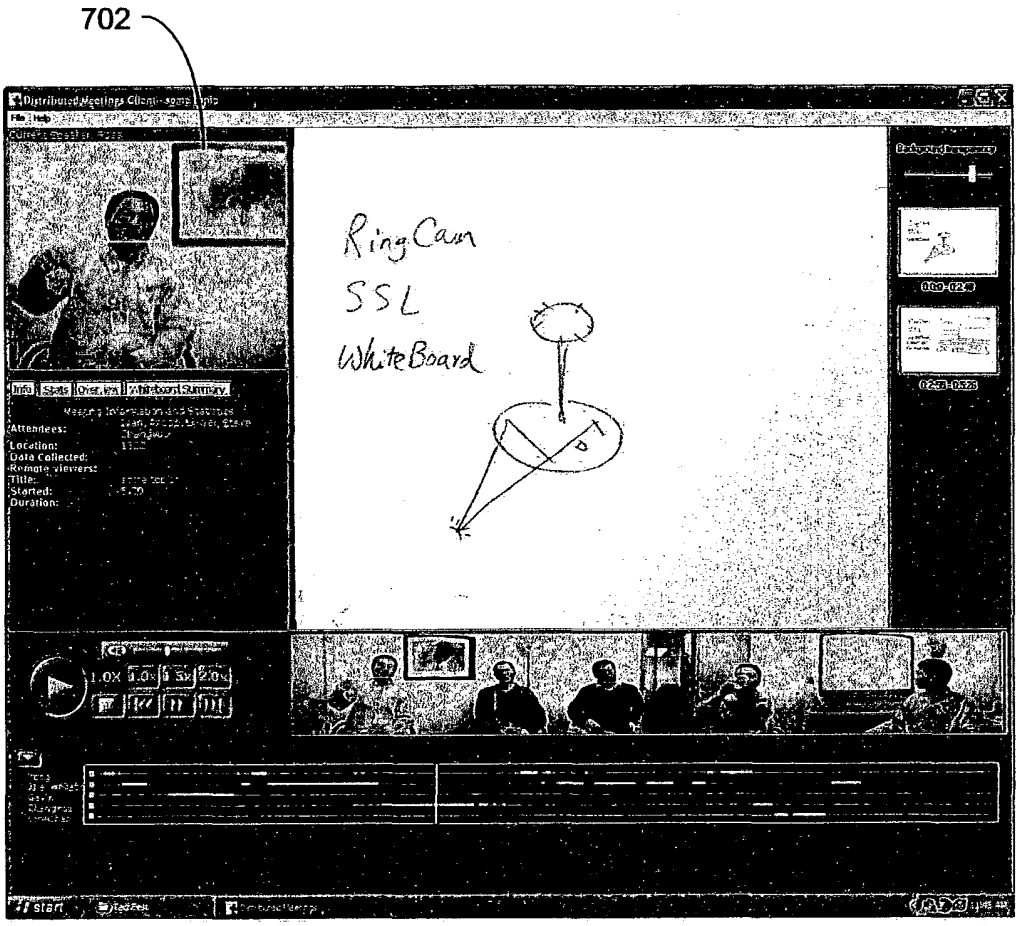



FIG. 7

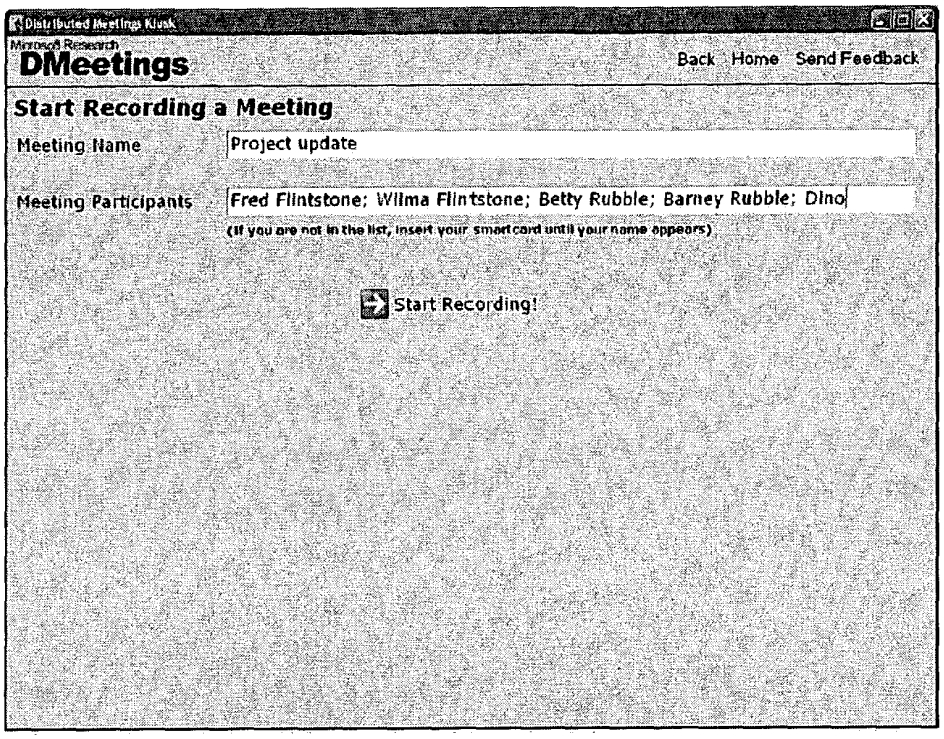

Distributed Meetings Kiosk
Microsoft Research
DMeetings
Back Home Send Feedback
Start Recording a Meeting
Meeting Name
Project update
Meeting Participants
Fred Flintstone; Wilma Flintstone; Betty Rubble; Barney Rubble; Dino
(If you are not in the list, insert your smartcard until your name appears)
Start Recording!

FIG. 8A

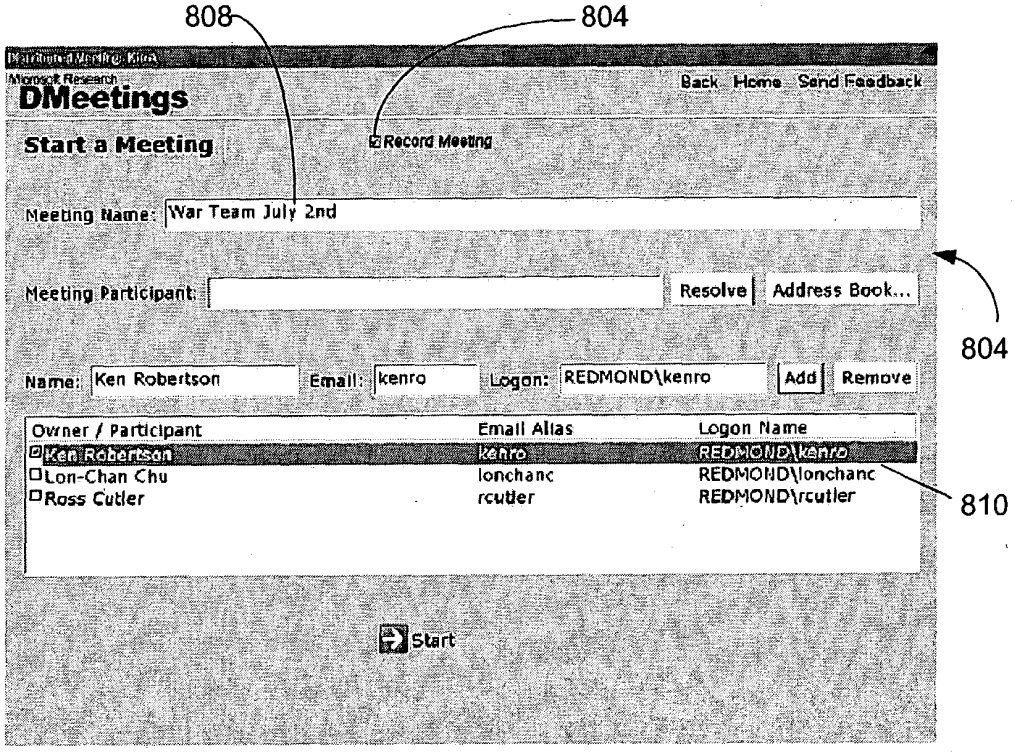

808
804
Microsoft Research
DMeetings
Back Home Send Feedback
Start a Meeting
Record Meeting
Meeting Name:
War Team July 2nd
Meeting Participant:
Resolve
Address Book...
804
Name:
Ken Robertson
Email:
kenro
Logon:
REDMOND\kenro
Add
Remove
Owner / Participant
Email Alias
Logon Name
Ken Robertson
kenro
REDMOND\kenro
Lon-Chan Chu
lonchanc
REDMOND\lonchanc
Ross Cutler
rcutler
REDMOND\rcutler
810
Start

FIG. 8B

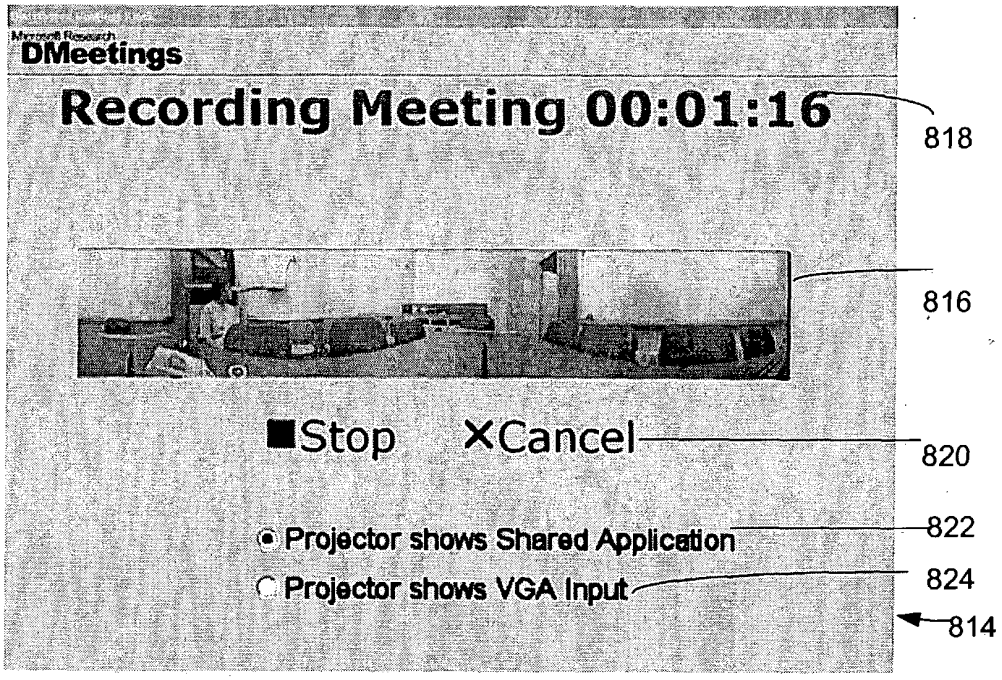

Microsoft Research
DMeetings
Recording Meeting 00:01:16
818
816
Stop
Cancel
820
Projector shows Shared Application
822
Projector shows VGA Input
824
814

FIG. 8C

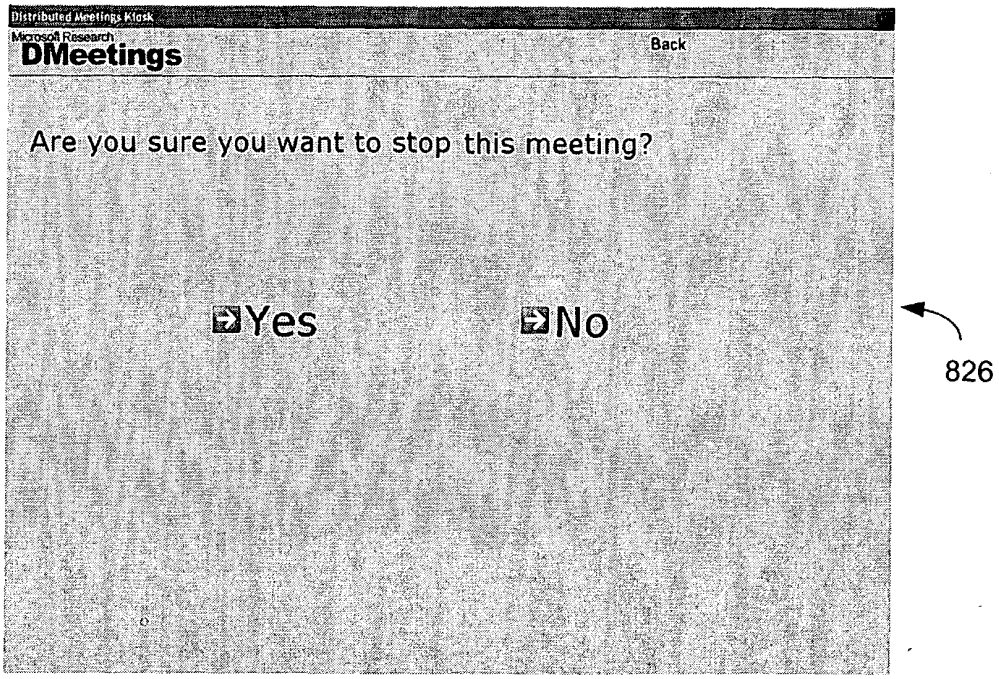

Distributed Meetings Kiosk
Microsoft Research
DMeetings
Back
Are you sure you want to stop this meeting?
Yes
No
826

FIG. 8D

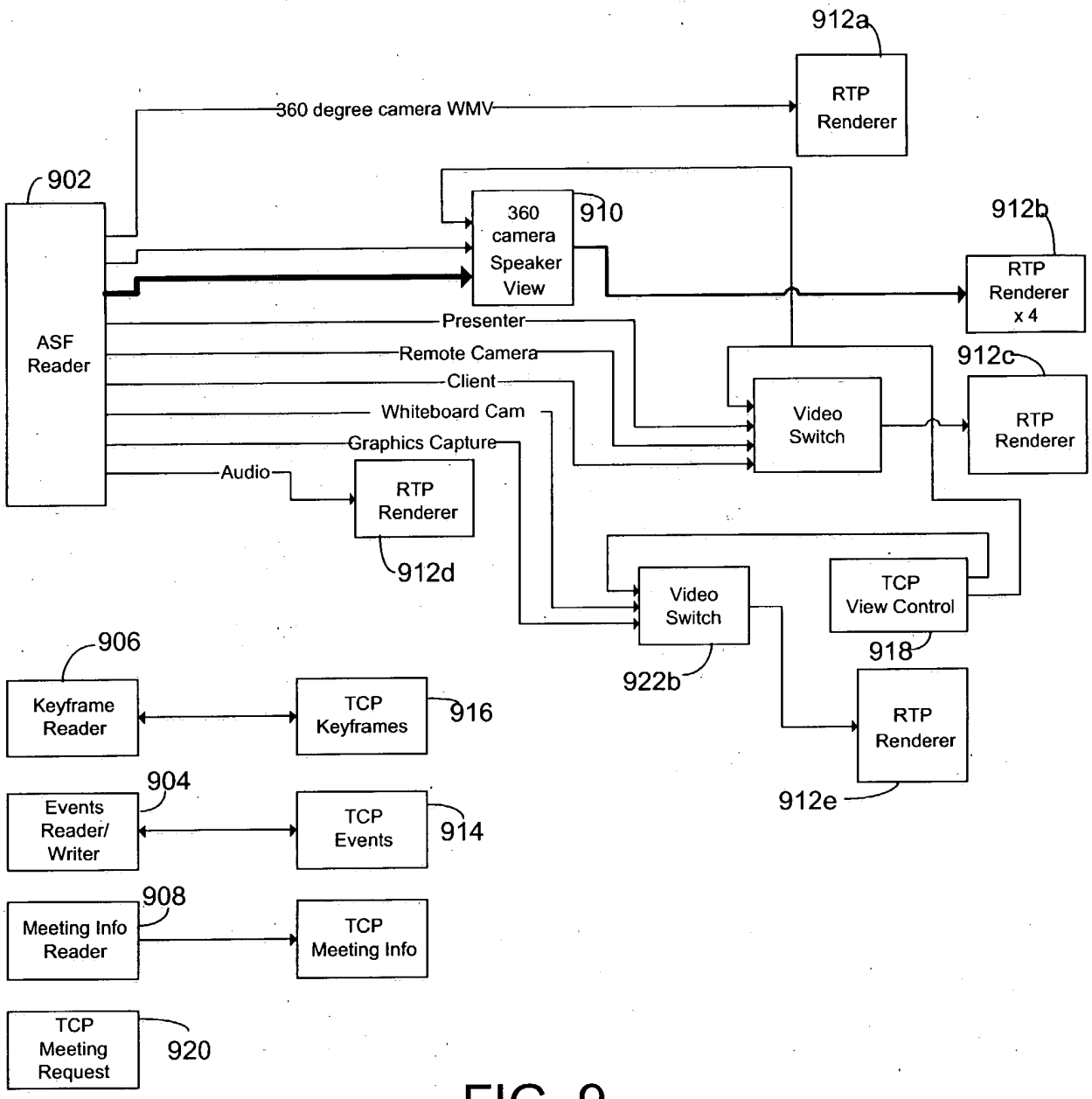

912a
RTP Renderer
360 degree camera WMV
902
ASF Reader
360 camera Speaker View
910
912b
RTP Renderer x 4
Presenter
Remote Camera
Client
Whiteboard Cam
Graphics Capture
Audio
Video Switch
912c
RTP Renderer
RTP Renderer
912d
Video Switch
TCP View Control
922b
918
906
Keyframe Reader
TCP Keyframes
916
RTP Renderer
912e
904
Events Reader/ Writer
TCP Events
914
908
Meeting Info Reader
TCP Meeting Info
TCP Meeting Request
920

FIG. 9

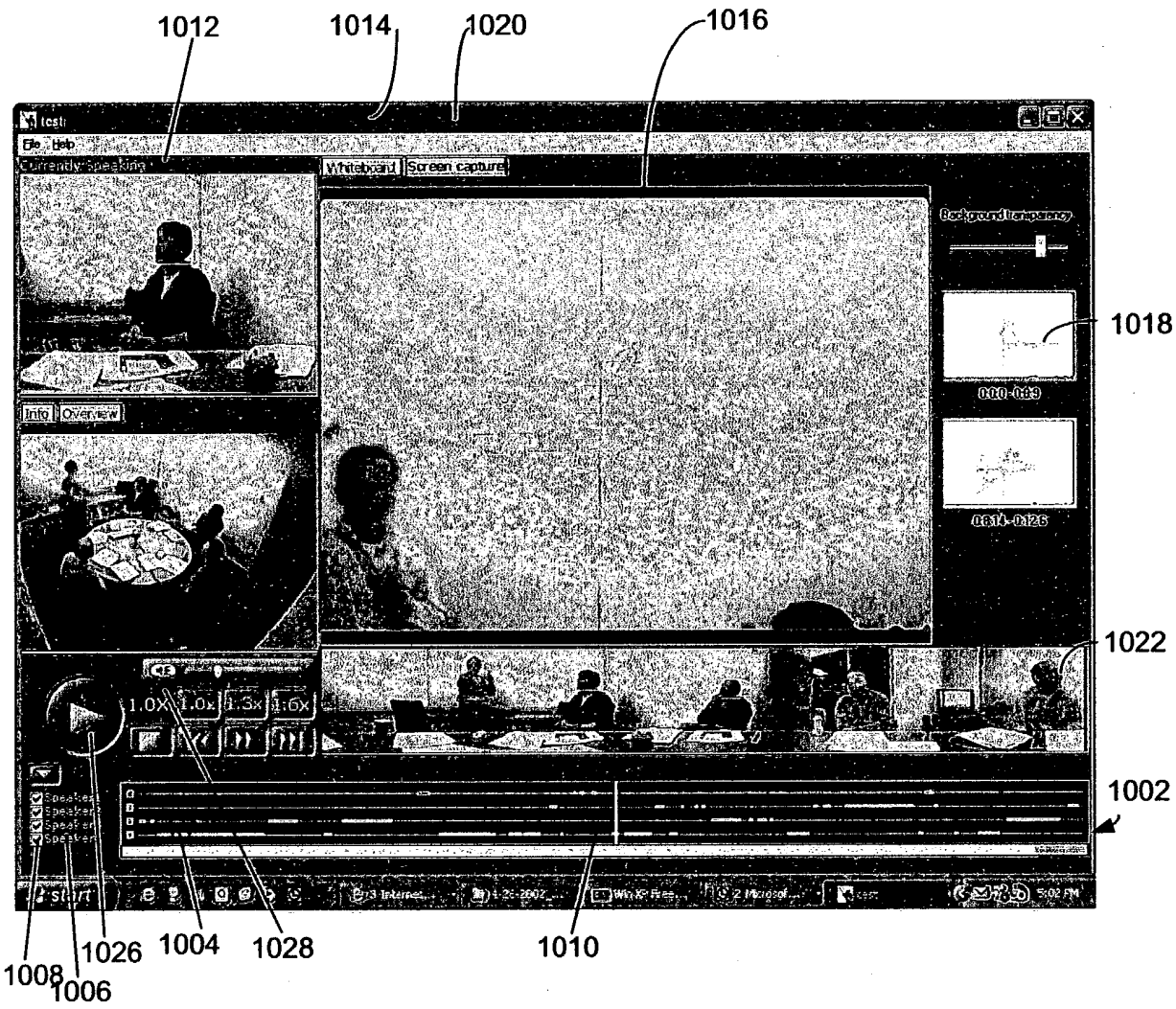

1012
1014
1020
1016
1018
1022
1002
1008
1006
1026
1004
1028
1010

FIG. 10

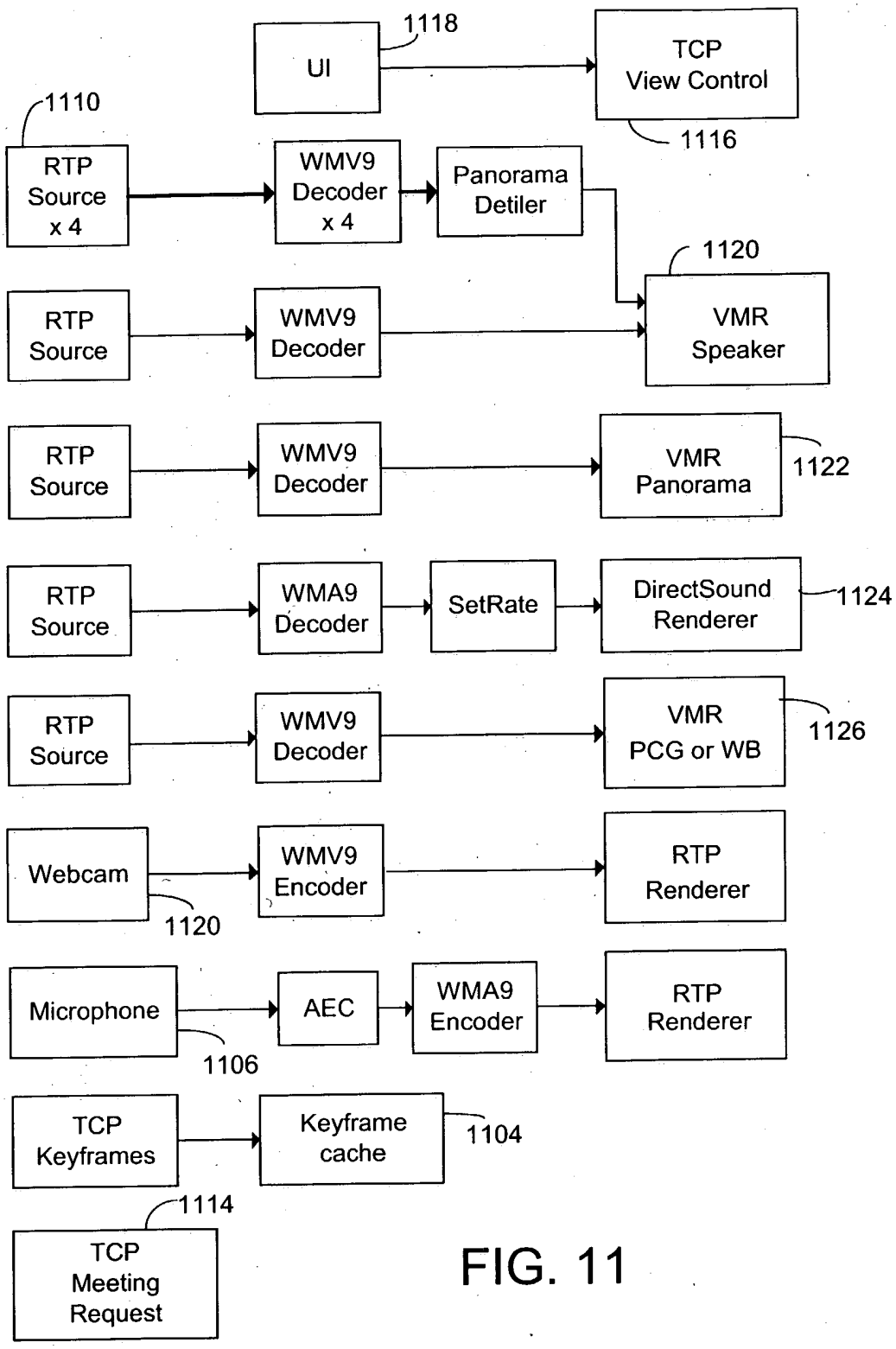

UI
1118
TCP
View Control
1116
1110
RTP
Source
x 4
WMV9
Decoder
x 4
Panorama
Detiler
1120
RTP
Source
WMV9
Decoder
VMR
Speaker
RTP
Source
WMV9
Decoder
VMR
Panorama
1122
RTP
Source
WMA9
Decoder
SetRate
DirectSound
Renderer
1124
RTP
Source
WMV9
Decoder
VMR
PCG or WB
1126
Webcam
1120
WMV9
Encoder
RTP
Renderer
Microphone
1106
AEC
WMA9
Encoder
RTP
Renderer
TCP
Keyframes
Keyframe
cache
1104
1114
TCP
Meeting
Request

FIG. 11

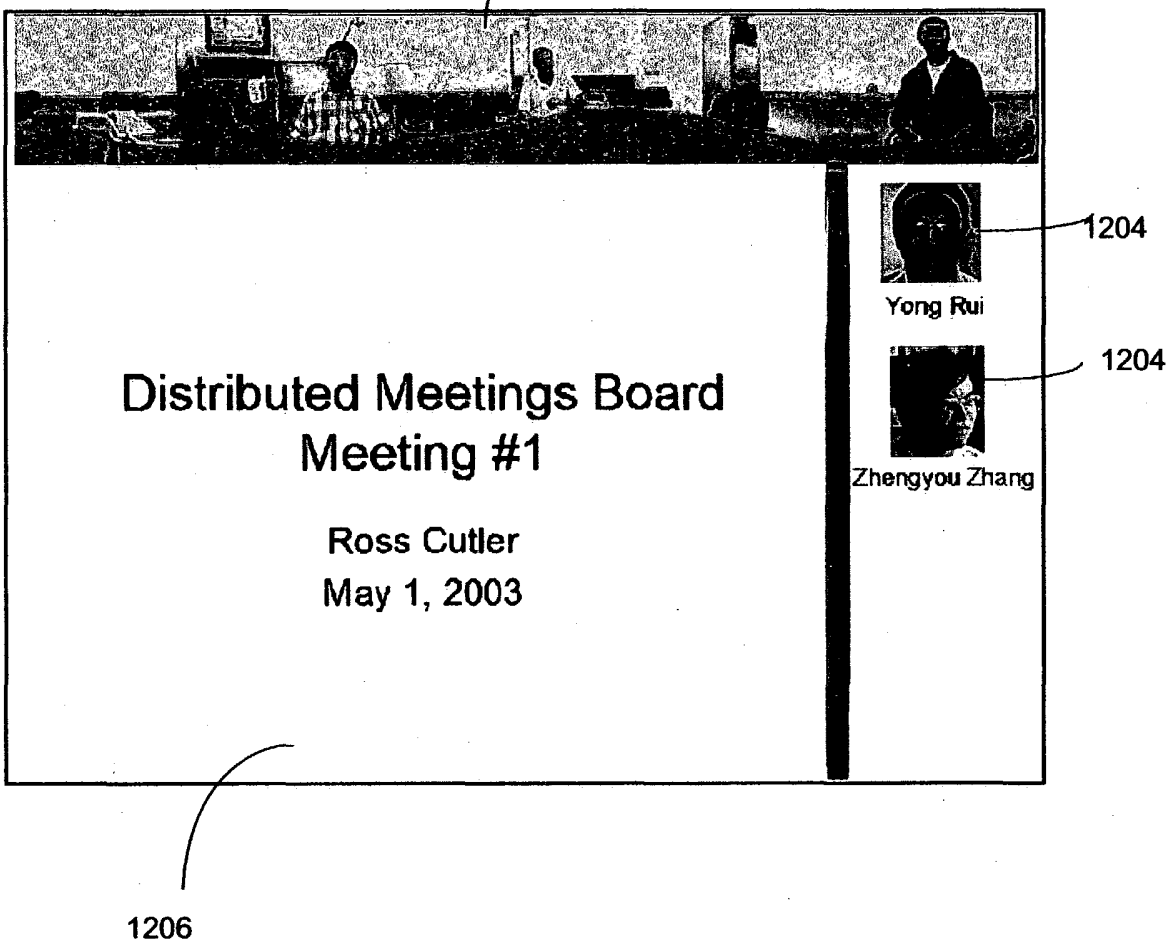

1202
Yong Rui
1204
Zhengyou Zhang
1204
Distributed Meetings Board
Meeting #1
Ross Cutler
May 1, 2003
1206

FIG. 12